

**ALASKA STATE LEGISLATURE
SENATE RESOURCES STANDING COMMITTEE**

January 24, 2022

3:30 p.m.

MEMBERS PRESENT

Senator Joshua Revak, Chair
Senator Click Bishop
Senator Gary Stevens
Senator Jesse Kiehl
Senator Scott Kawasaki

MEMBERS ABSENT

Senator Peter Micciche, Vice Chair
Senator Natasha von Imhof

OTHER LEGISLATORS PRESENT

Representative Mike Cronk

COMMITTEE CALENDAR

SENATE JOINT RESOLUTION NO. 11

Supporting development of the road belt electrical transmission line; and urging members of the Alaska delegation in Congress to pursue the development of this high- voltage electrical line in the interior of the state.

- HEARD & HELD

PREVIOUS COMMITTEE ACTION

BILL: SJR 11

SHORT TITLE: SUPPORTING ROAD BELT ELECTRICAL LINE

SPONSOR(s): RESOURCES

03/22/21	(S)	READ THE FIRST TIME - REFERRALS
03/22/21	(S)	RES
01/24/22	(S)	RES AT 3:30 PM BUTROVICH 205

WITNESS REGISTER

INTIMAYO HARBISON, Staff

Senator Joshua Revak
Alaska State Legislature
Juneau, Alaska

POSITION STATEMENT: Introduced SJR 11 on behalf of the sponsor.

CRYSTAL ENKVIST, Executive Director
Alaska Power Association
Anchorage, Alaska

POSITION STATEMENT: Testified in support of SJR 11.

TRAVIS MILLION, Chief Executive Officer
Copper Valley Electric Association
Copper Center, Alaska

POSITION STATEMENT: Testified in support of SJR 11.

CURTIS THAYER, Executive Director
Alaska Energy Authority
Anchorage, Alaska

POSITION STATEMENT: Testified in support of SJR 11.

ACTION NARRATIVE

[3:30:41 PM](#)

CHAIR JOSHUA REVAK called the Senate Resources Standing Committee meeting to order at 3:30 p.m. Present at the call to order were Senators Kawasaki, Kiehl, Stevens and Chair Revak. Senator Bishop arrived immediately thereafter.

SENATOR BISHOP joined the meeting.

SJR 11-SUPPORTING ROAD BELT ELECTRICAL LINE

[3:31:31 PM](#)

CHAIR REVAK announced the consideration of SENATE JOINT RESOLUTION NO. 11 Supporting development of the road belt electrical transmission line; and urging members of the Alaska delegation in Congress to pursue the development of this high-voltage electrical line in the interior of the state.

[3:33:33 PM](#)

INTIMAYO HARBISON, Staff, Senator Joshua Revak, Alaska State Legislature, Juneau, Alaska, introduced SJR 11 on behalf of the sponsor. He stated that this is not the first time the legislature has looked at this issue. Alaska has explored some form of the road belt intertie in both the 1980s and 1990s. Most recently, a similar resolution passed the Thirty-first Legislature, Legislative Resolve 3, 2019, sponsored by the

former representative from house district 6. Mr. Harbison noted that due to the influx in federal infrastructure spending, this is an opportune time to direct the attention of federal officials to viable infrastructure projects here in Alaska. He said that this resolution urges our federal delegation to relook at the viability of a rail belt project in today's market and to explore the most effective and efficient method to provide reliable power to people and communities along the road belt.

MR. HARBISON read the following sponsor statement into the record.

[Original punctuation provided.]

The development of the Road Belt electrical inter-tie transmission line would create a high voltage electrical line running from Sutton to Glennallen, where a sub-transmission line would extend to Gakona and on to Tok and north through the upper Tanana region to Delta Junction. The final leg of the project would run from just south of Fort Greely, back down to Gakona.

This resolution supports infrastructure development for energy and national security, economic development, and natural resources in the State of Alaska. The Trans Alaska Pipeline would benefit from the low-cost energy provided by the transmission line in the operation of the pipeline and protection of its off-grid pump stations.

A high-voltage electrical line would complete an electrical transmission bus loop and establish a second path for power transmission from Anchorage to Fairbanks which is needed during disasters such as earthquakes. With the infrastructure development and the increase in population at Eielson Air Force Base, Fort Greely and the Clear Air Force Station, the need for power in the region will increase significantly.

This resolution urges Congress to advocate for the security of the nation's northernmost military installations and oil infrastructure by pursuing the development of the Road Belt Inter-tie.

[3:36:47 PM](#)

CHAIR REVAK called for questions from the committee members.

SENATOR STEVENS requested a map with clearer detail to better differentiate the proposed transmission lines from the existing transmission lines.

CHAIR REVAK stated that the requested map would be produced.

[3:37:17 PM](#)

SENATOR KAWASAKI requested verification the resolution would be held in committee.

CHAIR REVAK answered yes.

SENATOR KAWASAKI pointed out a technical issue. He said that when this resolution was drafted there was an Acting Secretary of Interior; now a Secretary of the Interior has been appointed.

SENATOR KAWASAKI asked what the anticipated rate increases are for those affected by the improved transmission lines.

MR. HARBISON answered that question will be answered later by invited testifiers.

CHAIR REVAK introduced testifiers and opened invited testimony.

[3:39:28 PM](#)

CRYSTAL ENKVIST, Executive Director, Alaska Power Association, Anchorage, Alaska, testified in support of SJR 11. She stated the Alaska Power Association (APA) is the statewide organization for electric utilities whose members provide power from Utqiagvik to Unalaska, through the Interior and Southcentral, and down the Inside Passage. APA strongly supports the deployment of electric transmission infrastructure that advances the availability of reliable power to Alaskans and stimulates economic development. She stated the road belt electrical intertie transmission line is such a project. The major benefits would include the electrical interconnection of the Copper Valley - Richardson Highway region of the state with the existing Railbelt transmission grid. Ms. Enkvist stated that should the state receive federal funding support, this project would:

Increase regional system reliability by providing redundancy to the single transmission circuit that currently links the Fairbanks area with Anchorage.

Allow for the integration of more renewable energy.

Enhance the reliability of power to military installations in the Interior and Southcentral areas.

Increase economic development opportunities throughout the greater Copper Valley region.

MS. ENKVIST stated the Alaska Power Association supports exploratory efforts for the road belt project, including an analysis of transmission infrastructure options to achieve increased regional reliability and more affordable electric rates for residents in the Copper Valley - Richardson Highway region.

[3:41:36 PM](#)

SENATOR STEVENS asked what the electric rates are in Copper Valley and other communities she mentioned.

MS. ENKVIST deferred specific rate questions to the next testifier, Travis Million, CEO of Copper Valley Electric Association that serves the Valdez to Glennallen area.

SENATOR STEVENS asked which communities are served by Copper Valley.

MS. ENKVIST answered the communities she mentioned are served by Copper Valley Electric, but some transmission lines enter the Golden Valley service area and NEA service area.

SENATOR STEVENS said that he wants to get an idea of the rates that are currently paid and how those rates could be improved.

MS. ENKVIST responded that she would compile that information and provide it to the committee.

[3:42:54 PM](#)

SENATOR KIEHL referred to Ms. Enkvist's previous comments that pertained to additional generation and moving power. He asked how much excess generation capacity the utilities have that could be wheeled [moved] across the line before new generation is built.

MS. ENKVIST answered the proposed transmission system has the capability to transfer at least 75 megawatts (MW) of firm power with an additional 50 MW of non-firm power from Southcentral to Fort Greely/Fairbanks.

SENATOR KIEHL commented that those numbers correlate to the capacity of the line if he read the scoping document correctly. He rephrased the question and asked whether Matanuska Electric, Golden Valley, and Copper Valley have that kind of capacity to wheel [move] or to get to that kind of transmission, or whether new generation is needed.

MS. ENKVIST responded that she would get back to Senator Kiehl with the answer.

CHAIR REVAK directed Ms. Enkvist to send the answer to the Senate Resources Committee for distribution.

3:44:47 PM

TRAVIS MILLION, Chief Executive Office, Copper Valley Electric Association, Copper Center, Alaska, testified in support of SJR 11. Mr. Million said that Copper Valley Electric corporate headquarters is located in Glennallen. He indicated that it has a large service area but serves just 3800 members. The service territory is as far south as Valdez, 160 miles north to Sourdough, 100 miles east and west from Caribou Creek (between Glennallen and Palmer), and up the Tok Cutoff Highway as far as the High Frequency Active Auroral Research Program (HAARP) Research Facility.

MR. MILLION stated that Copper Valley Electric scoped this project and conducted a number of feasibility studies in the past. Previously, the Copper Valley Electric study only investigated a tie between Sutton and Glennallen. Now the proposed transmission has expanded to include a loop through Tok and Delta Junction.

MR. MILLION spoke to the merits of a loop feed. Currently, the only transmission infrastructure in Alaska runs from Homer to Fairbanks; he joked that in the industry this is called a long extension cord, a point-to-point line without redundancy. He said if this line were to go down due to natural disaster, an alternative route does not exist to move power from north to south. This proposal provides a solution to that problem. The road belt line creates an alternate route, a redundant loop through Glennallen, up to Tok, then over to Delta Junction.

3:46:54 PM

MR. MILLION indicated that this project would affect 75 percent of the state's population. It would provide additional reliability, capacity, and reduced energy cost for isolated utilities, such as, Copper Valley Electric and Alaska Power and

Telephone. He responded to a previously asked question which pertained to electricity rates. Mr. Million said that Copper Valley rates during the summer, when hydro is available, are 18 cents per Kilowatt hour(kWh). This winter, due to extremely high diesel costs, rates average nearly 40 cents per kWh in the Copper River Basin and in Valdez. He emphasized that Copper Valley Electric Association does not receive power cost equalization (PCE) funds through the state of Alaska.

MR. MILLION stated the loop would provide security and reliability for multiple Department of Defense facilities and potentially Alyeska Pipeline Services Company. This project has garnered a lot of broad support, including financial support, from communities along the route, as well as from utility companies and Native corporations. Entities that were once opposed to this project in the 1990s have now provided letters of support.

MR. MILLION pointed out that in 2019 the Denali Commission performed a reconnaissance study which looked at the feasibility for this loop feed. He read the "Conclusion" from the study into the record:

Reconnaissance-level engineering evaluation of the road belt intertie project indicates that it is technically feasible. Implementing it would increase DoD facility resilience and electric power reliability throughout the Alaska road system.

MR. MILLION stated that the Railbelt utilities currently seek a second transmission line; the utilities would probably consider the road belt project for the second line. He concluded that he supports these efforts.

[3:49:52 PM](#)

SENATOR STEVENS inquired about the factors which cause the electricity rates to vary so much between summer and winter.

MR. MILLION responded that Copper Valley Electric has two hydro projects. One is a high-mountain lake dam project which can be drained throughout the year. The other is a run of river project which only functions with flowing water, so the unit is taken offline when it freezes. He said that typically 30 percent of Copper Valley's electrical needs are met throughout the winter with hydropower. This year winter hit early, so that percentage fell from 30 to 20. The other 70 to 80 percent of electrical needs are met from either a cogeneration project, which is a

turbine located at the Petro Star refinery, or multiple diesel plants.

SENATOR STEVENS asked where the run of river hydropower installation is located.

MR. MILLION answered the hydropower installation is located in Valdez about two miles from the Solomon Gulch Project, next to the Valdez Marine Terminal.

3:51:38 PM

SENATOR KIEHL inquired about ownership of the road belt line as it passes through different service areas.

MR. MILLION answered that ownership of the line will be determined if the project goes forward. He envisioned that ownership would be similar to the existing Railbelt line and probably involve an Electric Reliability Organization (ERO) system. Maintenance activities and cost would probably be the responsibility of whichever utility owned the service area, but the process has not progressed far enough to make these determinations.

SENATOR KIEHL stated he might pose the same question to the next testifier.

3:52:49 PM

SENATOR BISHOP asked if the Copper Valley area population has decreased over the years, because residents have moved to the Mat-Su Valley for better electrical rates.

MR. MILLION answered that a reduction in residential loads has occurred, and it is fair to say that people have been leaving the area. He said whether due to jobs or electrical rates, a population decrease has occurred. He noted that the loss has been tempered by an increased industrial load. He added that large commercial loads have picked up with fish processors and other industries, but most of these industries are seasonal and occur in the summer when electrical rates are competitive.

3:53:59 PM

CURTIS THAYER, Executive Director, Alaska Energy Authority, Anchorage, Alaska, testified in support of SJR 11. Mr. Thayer said the Alaska Energy Authority (AEA) mission is to reduce the cost of energy in Alaska and deliver core services, such as improved energy safety, reliability, and affordability. AEA was established in 1976 as a public, independent corporation owned

by the state of Alaska with a seven-member board of directors. He announced that, for context, AEA owns the Bradley Lake Hydroelectric Project (also known as Bradley). It is the largest hydro project in Alaska and supplies the Railbelt with 10 percent of its energy.

MR. THAYER detailed the route and ownership of each section of the transmission line:

- Bradley Lake to Soldotna is owned by Homer Electric.
- Soldotna/Sterling to Quartz Creek, which is 40-mile segment through Coopers Landing, is owned by AEA.
- Quartz Creek to Anchorage is owned by Chugach Electric.
- Anchorage to Southcentral is owned by Matanuska Electric Association (MEA).
- AEA owns 170 miles of the intertie to Healy.
- Healy to Fairbanks is owned by Golden Valley.

[3:55:28 PM](#)

MR. THAYER stated that AEA has participated in various studies, including the Denali Commission *Reconnaissance Study*. He stated that, unlike previous studies, the road belt project is without a sponsor. He said that the project is technically feasible but has an expensive, estimated cost of \$1,000,000 per mile. Mr. Thayer said although the rail belt project is a costly piece, it is not necessarily out of alignment with line upgrades AEA, in coordination with the Railbelt utilities, is currently poised to undertake.

MR. THAYER explained that AEA's focus is to upgrade the Bradley to Anchorage line from 138 to 230 and to increase Golden Valley's power. AEA has been in communication with the federal delegation to obtain federal infrastructure bill funds to finance these line upgrades. He reiterated that AEA, and the five utilities, are currently at work to improve power and efficiency to 550,000 Alaskans. Mr. Thayer emphasized that the road belt project and AEA's line upgrades will not necessarily compete for federal funds, but previously established goals are AEA's focus.

[3:56:43 PM](#)

MR. THAYER said that the road belt project would add critically needed redundancy to Fairbanks. He said that the size of the line is admirable, but a concern is the limited number of customers the line would serve in low demand. He explained that in order to run at a capacity that allows reliability and cost efficiency, the line has to maintain a certain power level. Ft. Greely would be great tenant, but a couple more anchor tenants, like mines, would be extremely helpful in the economics of the road belt project. He said the dilemma is which should occur first: we build and they will come, or they come and we will build. He stated that either way, AEA is supportive of the road belt project's long-term goals and continued studies. Mr. Thayer suggested that in a future hearing, MEA, Chugach Electric and Golden Valley Electric explore how the existing line upgrade project might tie in/coordinate with the road belt project.

MR. THAYER reiterated that the focus of AEA right now is to improve power from Bradley to Anchorage. AEA will be unable to maximize power to Anchorage, Glennallen or elsewhere without the existing line upgrade. He emphasized that upgrades worth \$200 to \$300 million dollars are slated to begin within the next eighteen months.

CHAIR REVAK acknowledged the presence of Representative Cronk.

3:58:51 PM

SENATOR STEVENS asked for a status update on the Bradley Lake facility's need for an increase in readily available water.

MR. THAYER answered that the Babble Creek Diversion Project was completed in 2020, at a cost of \$47 million. The project diverted water into Bradley and has surpassed performance expectations; it is able to electrify 4,000 homes. Prior to the Babble Creek Diversion Project, Bradley was able to electrify 50,000 homes, so the Babble Creek Project resulted in nearly a 10 percent increase.

MR. THAYER said that currently in the works is the Dixon Diversion. This will be a coordinated effort between AEA and the Railbelt utilities. He explained that it will be a similar diversion project, but on a much larger scale. Whether it will require new generation or existing generation, it is predicted to increase the power from 24,000 - 30,000 homes. So, the power from Bradley is expected to increase by 50 percent. He said that AEA started to look at the Dixon Diversion Project study twelve months ago, but at this time, it is estimated to exceed \$200 million dollars.

MR. THAYER provided a power cost gauge:

- Bradley Lake is currently 4 cents per kilowatt, which is the cheapest power on the Railbelt.
- Natural gas is 7 to 8 cents per kilowatt.
- Fire Island wind is 9.7 cents per kilowatt.
- Railbelt utilities average 20 cents per kilowatt.

MR. Thayer said that hopefully questions about the Bradley expansion and future expansion possibilities have been answered.

SENATOR STEVENS commented that the projected 50 percent increase would be tremendous.

[4:01:09 PM](#)

SENATOR BISHOP asked if a line upgrade is needed to maximize the line's full potential and push Bradley's power north.

MR. THAYER answered yes, that is correct. He said to simplify the answer, Bradley can produce up to 120 megawatts, but the service lines are 75 megawatts. The lines that service Bradley were installed prior to construction of the Bradley facility and were designed to send power south, whereas the Bradley Lake Hydroelectric Project was designed to send power north. Mr. Thayer said that AEA acquired the Sterling Substation and the Quartz Creek Substation (SSQ Line), in December 2020, specifically to begin upgrades. He explained that Fairbanks receives 18 percent of Bradley power, and at one time, had a 40 percent line loss. Mr. Thayer said at 4 cents, this is clearly cheap power.

MR. THAYER stated AEA, in conjunction with the Railbelt utilities, is actively engaged in line upgrades. The power sales agreement, signed 30 years ago, authorizes required project work, which allows AEA to make line upgrades. Mr. Thayer mentioned that the bonds for Bradley were paid off this past summer 2021, so the debt service normally paid to bonds, has been rerouted to fund required project work. He said that AEA has committed to the \$250 - \$300 million line upgrade, and he noted that rerouted "required project work" funds must go through the Department of Law.

[4:02:52 PM](#)

SENATOR KIEHL asked whether it be homeowners or industry, what type of ownership structure on the road belt line would best benefit rate payers.

MR. THAYER answered that an ownership structure has not yet been identified. Whether it be a co-op or investor owned, ownership structures need to be studied and the best benefit to the consumer considered. The project would be a transmission asset, so that would be part of the analysis. He said that transmission line power can only be dropped in population centers like Ft. Greely, Glennallen, mines and Tok; it cannot be dropped at a nearby house just because it is located near the line.

4:05:00 PM

SENATOR KIEHL stated the cost estimates were very rough. He said that in the past, AEA has looked at potential renewable energy and other generation sites around the state. He asked for the same \$500 million dollars, are there other local generation opportunities that could be brought online to provide power more efficiently or cheaply.

MR. THAYER responded that more research is necessary, but Bradley is already a state-owned asset and would bring on additional power. He said that the project that would make the greatest difference on the Railbelt is construction of the Susitna-Watana dam. It would take the Railbelt from an average of 15 percent renewable energy to 60-65 percent renewable energy and, based on 2014 cost estimates, would provide power at 6 cents per kilowatt. He added that Susitna-Watana dam would have a 100-year life. Mr. Thayer recommended that the state seriously consider Susitna-Watana infrastructure as a long-term strategy for a 450-to-600-megawatt plan. He stated that if there is to be a road belt, this would encourage mine activity, because there would be a source of cheap power.

SENATOR KIEHL asked whether the power from the Susitna-Watana side of the valley could be sent to the communities on the Matanuska side of the valley.

MR. THAYER answered the existing infrastructure would be utilized to send the power north to Fairbanks and dropped down to a road belt. Another alternative would be to send the power south into MEA territory and cut across into the Valley or into the Glennallen area. Susitna-Watana power would be designed to provide the majority of power to Fairbanks and Southcentral, so looping in with the road belt could be easily done.

SENATOR KIEHL stated that he interpreted the answer to mean no, you would need both.

[4:08:20 PM](#)

SENATOR BISHOP commented that Susitna-Watana power would be 64 percent renewable for 75 percent of the Railbelt.

[4:09:08 PM](#)

CHAIR REVAK opened public testimony on SJR 11; finding none, he closed public testimony.

CHAIR REVAK held SJR 11 in committee.

[4:10:23 PM](#)

There being no further business to come before the committee, Chair Revak adjourned the Senate Resources Standing Committee meeting at 4:10 p.m.